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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,716	09/25/2003	Hiroshi Watabe	031217	6377

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WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP
1250 CONNECTICUT AVENUE, NW
SUITE 700
WASHINGTON, DC 20036

EXAMINER	
BASINGER, SHERMAN D	

ART UNIT	PAPER NUMBER
3617	

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/669,716	WATABE ET AL.	
	Examiner	Art Unit	
	Sherman D. Basinger	3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-9 and 11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-9 and 11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

EA

DETAILED ACTION

Claim Objections

1. Claim 11 is objected to because of the following informalities: in line 5 after direction as semi-colon is followed by a comma. Appropriate correction by deleting one of the semi-colon or comma is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-4, 6-9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanno 820 in view of Gregory and Kanno 188.

Kanno 820 discloses a system for controlling a speed of an internal combustion engine installed in an outboard motor mounted on a boat and having a propeller powered by the engine to propel the boat, the engine having a throttle valve 80 that regulates air to be sucked, the system comprising an actuator 86 connected to the throttle valve to move it in an opening direction or in a closing direction; an engine speed detecting means 228; an engine trouble detecting means 238; an engine speed discriminating means 256, 262 for discriminating whether the detected engine speed exceeds a predetermined speed when it is detected that the trouble has occurred in the engine; and a disable 270.

Kanno 820 does not disclose actuator driving means for driving the actuator 86 to move the throttle valve in the closing direction such that the engine speed drops when it is discriminated that the detected engine speed exceeds the predetermined speed. Gregory discloses an actuator driving means 18 for driving the actuator 28 to move the throttle valve in the closing direction such that the engine speed drops when it is sensed that the sensor 12 is about to leave the water.

Kanno 820 also does not disclose the actuator driving means driving the actuator to move the throttle valve in the closing direction by an amount repeatedly such that the engine speed drops gradually.

Kanno 188 discloses in column 5, lines 55-60 that an ECU can be used to open and close the throttle valve with a stepper motor, the stepper motor being the actuator. A stepper motor will open and close the throttle valve by an amount repeatedly such that the engine speed will increase or drop gradually, the repeated amount being each step of the stepper motor.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to replace actuator 86 of Kanno 820 with a stepping motor as taught by Kanno 188 and to use the teachings of Gregory to have the disable 270 of Kanno 820 drive the stepping motor provided to Kanno 820 to close the throttle by an amount repeatedly such that the engine speed drops gradually.

Motivation to do so is to control engine speed through use of the throttle as opposed to disabling a piston or causing any other type of engine speed reduction which is more detrimental to the engine than engine speed reduction through throttle control.

The alerting means is either of 266 or 268 of Kanno.

With regard to claim 4, the engine will still run at idle speed.

Kanno 820 discloses a computer program (see figure 8) embodied on a computer-readable medium (the ECU 110) for controlling speed of an internal combustion engine 36 installed in an outboard motor 10 mounted on a

boat 20 and having a propeller 204 powered by the engine to propel the boat, the engine having a throttle

valve 80 that regulates air to be sucked and an actuator 86 connected to the throttle valve to move it in

an opening direction or in a closing direction, comprising the steps of:

detecting the speed of the engine S2;

detecting a trouble occurred in the engine S3; and

discriminating whether the detected engine speed exceeds a predetermined speed when it

is detected that the trouble has occurred in the engine S5.

Kanno 820 does not disclose driving the actuator to move the throttle valve in the closing direction by an amount repeatedly such that the engine speed drops gradually,

when it is discriminated that the detected engine speed exceeds the predetermined speed.

Kanno 820 does disclose a disable 270.

Gregory discloses an actuator driving means 18 for driving the actuator 28 to move the throttle valve in the closing direction such that the engine speed drops when it is sensed that the sensor 12 is about to leave the water.

Kanno 188 discloses in column 5, lines 55-60 that an ECU can be used to open and close the throttle valve with a stepper motor, the stepper motor being the actuator. A stepper motor will open and close the throttle valve by an amount repeatedly such that the engine speed will increase or drop gradually, the repeated amount being each step of the stepper motor.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to replace actuator 86 of Kanno 820 with a stepping motor as taught by Kanno 188 and to use the teachings of Gregory to have the disable 270 of Kanno 820 drive the stepping motor provided to Kanno 820 to close the throttle by an amount repeatedly such that the engine speed drops gradually.

Motivation to do so is to control engine speed through use of the throttle as opposed to disabling a piston or causing any other type of engine speed reduction which is more detrimental to the engine than engine speed reduction through throttle control.

Response to Arguments

4. Applicant's arguments filed May 31, 2005 have been fully considered but they are not persuasive.

5. Applicant argues that an object of the present invention is to provide an engine speed control system that lowers the engine speed without causing the engine to vibrate when a trouble has occurred in the engine. Applicant argues that to accomplish this objective, the present application claims an actuator driving means for driving the actuator to move the throttle valve in the closing direction by an amount repeatedly such that the engine speed drops gradually, when it is discriminated that the detected engine speed exceeds the predetermined speed. Applicant argues that Kanno does not teach the aforementioned problem or its source.

6. These arguments are not persuasive. Kanno 188 does not have to teach the problem or its source, as the problem and its source is not being claimed. What is being claimed that Kanno teaches is the closing of a throttle valve by an amount repeatedly such that the engine speed drops gradually. The closing of a throttle valve by a stepper motor accomplishes this. Each step is an amount. The stepper motor runs until the valve is closed. So the steps are repeated until the throttle valve is closed. Closing the throttle valve lowers engine speed.

7. "Gradually" is a term of relativity What is gradual in one instance may not be in another. Thus, it can be held that the closing of the throttle valve by a stepper motor

similar to that of Kanno 188 is a gradual closing of the valve and a gradual reducing of the engine speed.

8. Applicant argues that what is clearly missing from Kanno 188 is any discussion about using a stepper motor to close the throttle valve by an amount repeatedly such that the engine speed will increase or drop gradually. While Kanno 188 does not state in the same words that the stepper motor will close the throttle valve by an amount repeatedly such that the engine speed will drop gradually, Kanno 188 does encompass this concept in the use of a stepper motor to close a throttle valve. Again, each step of closure of the throttle valve is an amount which is repeated until the throttle valve is closed as desired. Again, gradually is relative in nature. What is gradual in one instance is not in another.

9. **In re Kotzab, 55 USPQ2d 1313** has been considered by the examiner. The presentation of actual evidence and particular findings in the instant case refers to the Board's implicit conclusion that "one system" is equal to "one sensor". This does not seem to apply to it being obvious to use a stepper motor to close the throttle valve of Kanno 820 in view of Kanno 188 teaching that a stepper motor can be used to close a throttle valve. Kanno 820 uses actuator 86 to close his throttle valve. One of ordinary skill with Kanno 820 and Kanno 188 in front would find it obvious to use a stepper motor to close the throttle valve as opposed to a cable for the benefits of precision provided by a stepper motor. One having ordinary skill in the art will see that in Kanno 820 actuator 86 is already present to close the throttle valve. One having ordinary skill in the art will see that a stepper motor can be used to close a throttle valve. One having ordinary skill

in the art will realize that a stepper motor will close the valve more precisely than a cable and lever will and that the use of a stepper motor will not require a much hardware as that used in actuator 86 of Kanno 820. Thus, one of ordinary skill with have ample motivation to choose a stepper motor in place of an actuator as 86 of Kanno 820.

10. For the above reasons, the rejections stand.

Conclusion

11. Applicant's amendment to claim 11 necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherman D. Basinger whose telephone number is 571-

272-6679. The examiner can normally be reached on Monday through Friday, 5:30 a.m. to 2:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel J. Morano can be reached on 571-272-6684. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sherman D. Basinger
Primary Examiner
Art Unit 3617

6/14/05

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